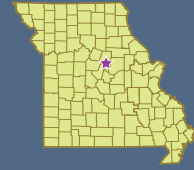


# Bonne Femme Karst

## Conservation Opportunity Area



Ozark  
Highlands



*The rock bridge at Rock Bridge State Park was created when a portion of cave roof collapsed.*

Roxie Campbell, Missouri Department of Natural Resources

People have long been drawn to the cool, clear waters of Bonne Femme and Little Bonne Femme Creeks. A grist mill and whiskey distillery once operated along the stream flowing from Devil's Icebox Cave. Today, small farms and residential neighborhoods surround the nearby city of Columbia.

The western half of the Bonne Femme watershed (the area of land that drains to the creek) is dominated by forest and woodland cover. Bonne Femme's forests and woodlands support over 65 species of migrating birds. Glades and sinkhole ponds add diversity to the landscape. A broad prairie plain occupies the eastern half of the watershed. Agricultural cropland has replaced most of the

original native prairie.

Like many cave-rich landscapes, surface water drains into the ground to form underground rivers and streams. Water quality on the surface can affect cave life below the ground. There are 42 known caves in the Bonne Femme Karst Conservation Opportunity Area (COA). Devil's Icebox Cave is ranked 3rd in the state for its high biological diversity. The cave is home to federally endangered Indiana bats, gray bats and the endemic pink planarian (known only to live in the stream of Devil's Icebox Cave). An existing initiative, the Bonne Femme Watershed Partnership, strives to "use watershed planning as a tool to prevent further water resource degradation."

## Bonne Femme Karst Conservation Strategies

- Establish or improve forested stream banks.
- Reduce water pollution and water flow changes that threaten streams.
- Control and eradicate unwanted invasive and exotic species.
- Restore and improve the condition of existing forested natural communities.
- Reduce tall fescue and other non-native cool-season pasture forage coverage in favor of native grasslands, forests and woodlands.



Roxie Campbell, Missouri Department of Natural Resources

*The Devil's Icebox is a double sinkhole that offers a view of the underground stream and cool, refreshing air. Devil's Icebox Cave contains over seven miles of underground passageways.*

### Priority Research and Inventory Needs

- Inventory cave life in Hunter's Cave and Spring Cave.
- Investigate the habitats and life histories of cave species of conservation concern.
- Expand water quality monitoring capabilities and guidelines.
- Update land use inventory through remote sensing technology.
- Test for the presence of harmful bacteria in water samples.
- Gather water flow information.

### Conservation Partners

**Existing:** Bonne Femme Watershed Project; Friends of Rock Bridge State Park; Greenbelt Land Trust; Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC)

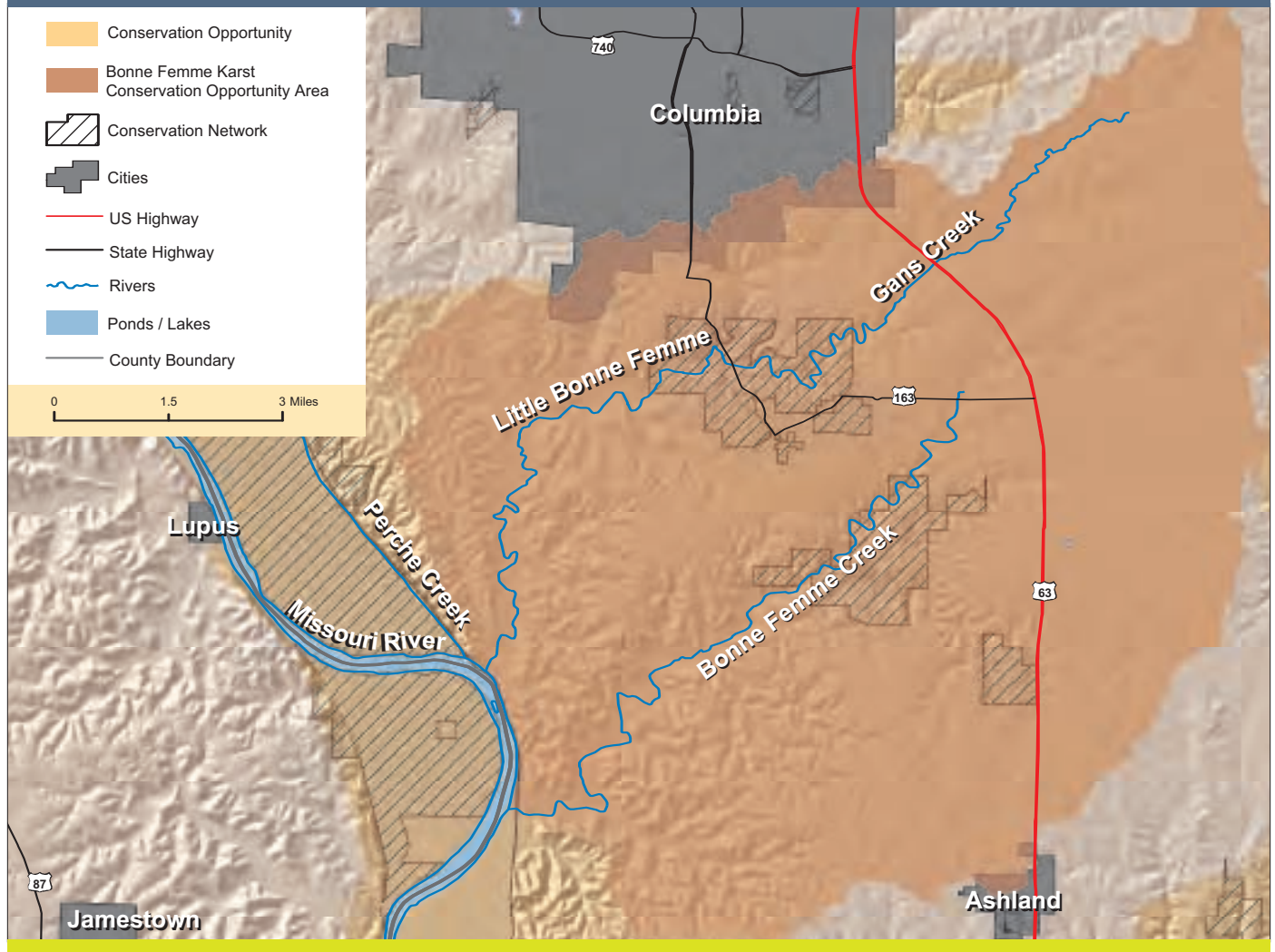
*The pink planarian is a flatworm found only in Devil's Icebox Cave. The cave also supports a maternity colony of the federally endangered gray bat.*



Scott W. Schulte, Missouri Department of Natural Resources File Photo



## Bonne Femme Karst Conservation Opportunity Area



**Potential:** Private landowners; Missouri Master Naturalist Program – Boone’s Lick Chapter; National Wild Turkey Federation (NWTF); Missouri Native Plant Society; Missouri Environmental Education Association; Ozark Regional Land Trust; Missouri River Communities Network; Columbia Audubon Society; Audubon Missouri; Chouteau Grotto; Missouri Stream Teams; Missouri Forestkeepers; Sierra Club; Boone County Smart Growth Coalition; Show-Me Clean Streams; Community Storm Water Project; Natural Resources Conservation Service; Boone County Soil and Water Conservation District; U.S. Geological Society; City of Columbia; Boone County Planning Department; U.S. Department of Agriculture – Agricultural Research Service; Environmental Protection Agency

### Funding Sources

**Existing:** DNR annual budget; DNR 319 Grant; USFWS Partners for Fish and Wildlife Program; MDC annual budget; MDC Private Lands Cost Share Program; MDC Wildlife Diversity Fund

**Promising Future Sources:** Quail Unlimited Quail Habitat Incentive funds; NWTF Wild Turkey Super Fund; DNR 319 Grants; MDC State Wildlife Grants

### Existing Conservation Network

Rock Bridge Memorial State Park; Katy Trail State Park; Three Creeks Conservation Area; Charles Green Conservation Area; Nifong Park; University of Missouri: South Farm, Bradford Farm, Equine Center

## Sinkholes: Windows to the Underground



*Sinkholes riddle the Bonne Femme Karst Conservation Opportunity Area. These shallow depressions form when cave roofs collapse. Water can enter underground cave systems very quickly through sinkholes. Often used as illegal dumping sites, refuse in sinkholes can lead to pollution of the local water supply.*

Ann Koenig, Missouri Department of Conservation

### Conservation Challenges

The Bonne Femme watershed faces many threats from its close proximity to the growing cities of Columbia and Ashland. Additional obstacles include limited staff time and budgets,

variable attitudes of landowners, uncertain local political support, restrictive management plans on public lands, expense of water quality monitoring and existing high real estate values.

To learn more about the Bonne Femme Karst Conservation Opportunity Area, please contact:



Missouri Department of Conservation  
Wildlife Division  
P.O. Box 180  
Jefferson City, MO 65102-0180